

use are reasonably current and accurate, but irrigation pumping data are not, because of widespread resistance to metering.

Kansas follows a grid system of mapping that designates the exact location of each gas, oil, water well, industrial activity, or storage site. Its ground water basins have been mapped, and the chemical quality (inorganics) is known, along with appropriate boundaries and depths. Production data are available for municipal and industrial wells and for some irrigation wells. Most Kansas counties have ground water and geology reports, some of which date from the mid-1980s. For more than a decade, the reports have been based on aquifer systems, of which the Ogalalla is the most pervasive and intensively studied. Considerable information is available on amounts and areas of aquifer recharge, and the state has studies embracing recharge areas. Scans of organic compounds have been done at a small percentage of municipal wells, and an expanded program of screening for purgeable organics is under way. Laboratory capability for organics, while substantial, is being expanded, and private analytical laboratories are licensed by the state.

Data Measurement and Analysis

Water quality and hydrogeologic data needs can be met only by adequate laboratory facilities. These facilities must produce data for prevention as well as for the urgent demands generated by emergencies and pollution cleanup.

Laboratory capability may be available from local health departments and large water utilities, state health and natural resource agencies, USGS, EPA, and private facilities. Local and state laboratories are usually depended on for meeting the continuing needs for data for ground water protection and remediation programs. The demands on them are urgent and compelling when data are needed for chemical and oil spills and hazardous waste cleanup, often resulting in a lower priority for analysis of ongoing and prevention-related water and soil samples. Many of these laboratories have a continuous program of education and quality control to assure accurate results. Nearly all states with large analytical loads can benefit from in-house laboratory capability to check outside analyses and to provide other special analytical services on demand.

Adequate funding for laboratory equipment and personnel and the capacity to manipulate and analyze results are essential for an effective state ground water protection program. Funding sources need to be stable and as continuous as possible. Dedicated fees, contracts with large water utilities, general revenue, federal program funds, and local taxes, or some combination thereof, are used to obtain laboratory funds. Some states have used